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# Should Navy Build New Nuclear Attack Subs?

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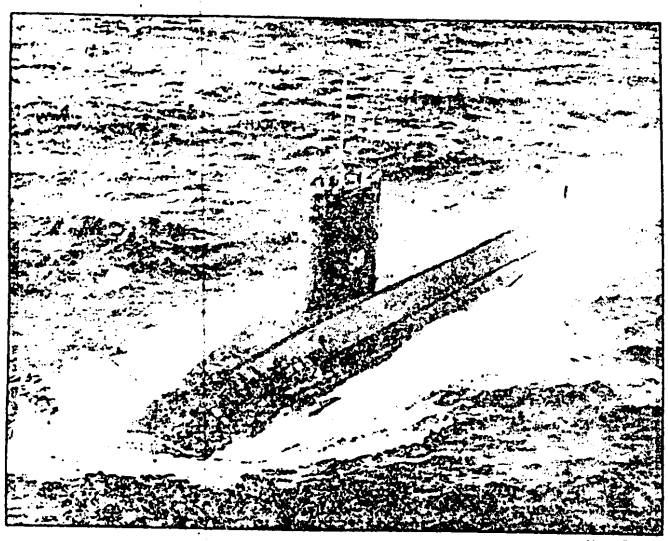
THE NAVY'S RECENT request for almost $800 million in additional start-up funds for a new class of nuclear-powered attack submarines is reviving an old question in the Congress: Should we continue to buy large, expensive nuclear attack submarines, when smaller, cheaper diesel-electric submarines could handle the attack missions just as well?

The question has been based on a common misconception: that the United States does not have any diesel-electric submarines at her disposal. In fact, the U.S. and her allies have just as many (approximately 150) diesel-electric submarines as the Soviet Union and her allies. What's more, several U.S. allies (most notably, West Germany and The Netherlands) have active diesel-electric submarine construction programs; by contrast, none of the Soviet allies builds diesel-electric submarines, preferring instead to obtain them from their Soviet benefactors.

Nevertheless, in an era of unfortunate "gold-plating" of weapons systems, U.S. lawmakers and taxpayers are well justified in closely examining the rationale for funding a new class of submarine that will cost more than $1 billion per vessel, when advanced diesel-electric designs can be obtained in the $200 million range. The key question in this examination should be: Can diesel-electric submarines perform the same missions as their nuclear-powered counterparts at lower cost?

The primary mission of the U.S. attack submarine is the detection and destruction of Soviet submarines, both ballistic missile and attack varieties. The Soviet fleet deploys approximately 375 submarines, including more than 65 ballistic missile submarines (SSBNs). The U.S. attack submarine fleet numbers approximately 100 vessels. Accordingly, superior technology and tactics are required to overcome this vast numerical disadvantage.

Detection and destruction of the Soviet SSBN fleet will be an extremely challenging and time-sensitive task. Already respectful of U.S. attack submarine capabilities, the Soviet SSBN fleet could be expected to launch its missiles from protected sanctuaries, either close to home ports or from under the Arctic ice pack. Increased missile ranges and accuracies permit the Soviets this luxury.



Navy Photo

**Diesel-electric submarine Blueback (SS 581) underway. It is a misconception that the United States does not have any diesel-electric submarines at her disposal.**

Attack submarines attempting to penetrate home port sanctuaries require great speed, quietness, endurance and large numbers of advanced weapons to do maximum damage in the shortest amount of time. In stalking Soviet SSBNs under the ice, one of the most critical requirements is the ability to "hold one's breath" for days or weeks at a time, while searching for the telltale contact from a Soviet vessel.

In both of these mission scenarios, diesel-electric submarines are at a disadvantage. Slower speeds, fewer and less advanced weapons, and the need to "snorkel" to recharge batteries detract from the diesel-electric submarine's utility for the anti-SSBN mission. In fact, even the diesel-electric submarine's most ardent proponents do not envision using this kind of vessel for strategic anti-submarine warfare. It is, nevertheless, important to note that nuclear-powered attack submarines (SSNs) are especially suited to this mission.

Destruction of the Soviet attack submarine fleet will likely be a more free-wheeling, wide-ranging affair than attacks on SSBNs. Ideally, in a crisis, most Soviet SSNs would be caught at key "choke points" as they attempt to reach the open ocean. One such "choke point" is the Greenland-Iceland-United Kingdom (GIUK) Gap. Diesel-electric submarines currently deployed with allied navies could serve a useful role in such a scenario, by making the relatively short transit from their northern European homeports and acting as "floating mines" or "fixed barriers" against Soviet submarines. Allied diesel-electrics now participate in this fashion in NATO naval exercises.

Once again, however, nuclear-powered attack submarines are superior to diesel-electrics in the various attack roles. In addition to being able to perform the "fixed barrier" missions, SSNs can search for Soviet SSNs during high-speed transits, and after reaching their deployment area, can search large ocean areas while remaining continuously submerged. Once a target is acquired, SSNs can bring to bear a far greater number and variety of advanced ASW weapons than can their diesel-electric counterparts.

A key attack submarine mission, which has gained even greater prominence under Navy Secretary John Lehman, is that of actual land attack against the Soviet Union and her allies, using long-range conventional and nuclear-armed Tomahawk sea-launched cruise missiles (SLCMs). Submarine-deployed SLCMs are a tremendous offensive force multiplier, requiring the Soviet Union to treat each SSN as a potential strategic reserve weapon which may come into play during a crisis. Diesel-electric submarines, due to their small size and other limitations, are not able to perform this mission.

Thus, in answering the question of diesel-electric submarine utility, it must be said that these vessels are demonstrably incapable of performing the vast majority of missions assigned to SSNs. This is not to say that diesel-electrics do not have a place in U.S. and NATO maritime strategy; their extreme quietness while operating on batteries and their relatively low cost are powerful arguments for continuing to depend upon them to do the jobs that they do best.

But, with only two active submarine-building yards (the Soviets have at least five), the U.S. attack submarine fleet will have to depend upon newer, larger, more advanced nuclear attack submarines, like the SSN-21 *Seawolf*. The Soviets certainly recognize the value of such submarines: they have three new, large (6,400-8,000 metric ton) SSN classes undergoing sea trials. By contrast, their diesel-electric submarine fleet is at its lowest numerical level (83 boats) since 1933.

The laws of physics require larger vessels to insulate noisy equipment from the acoustically sensitive sea water; the laws of war dictate that each platform deploy the maximum possible number of sophisticated weapons systems. To comply with both sets of laws, the U.S. attack submarine program must proceed along its present path. U.S. diesel submarine construction would represent a critical point in our drive for a modernized attack submarine fleet.

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